

## II. Remarks

Claims 25-45 were previously pending. Applicants appreciate the indication that claims 40 and 42 would be allowable if rewritten in independent form. To that end, claims 40 and 42 have been rewritten in independent form. Claims 43-45 depend from and further limit claim 42. As such, claims 40 and 42-45 are in condition for allowance and an early indication of allowance is hereby requested. Claim 41 has been canceled.

Reconsideration of claims 25-40 and 42-45 is requested in light of the above amendments and the following remarks.

### Claim Objections

Applicants have amended claim 45 to correct the informality noted by the Examiner.

### §102 Rejections

Claims 29, 35, and 39 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication 2004/0167626 to Geremakis et al. (“Geremakis”).

The PTO provides in MPEP §2131 that

“[t]o anticipate a claim, the reference must teach every element of the claim . . .”

Therefore, to sustain the rejections of claims 29, 35, and 39 Geremakis must teach all of the claimed elements of each claim.

With respect to amended independent claim 29, Geremakis at least fails to teach, “preparing the disc space for insertion of a motion preserving prosthetic device including cutting a transforaminal slot in at least one of the first intervertebral member and the second intervertebral member.” Geremakis simply fails to teach preparing a slot in an intervertebral member as recited. Thus, for at least this reason Geremakis fails to teach all of the claimed elements of independent claim 29. Therefore, Applicants request that the §102 rejection of claim 29 be withdrawn.

With respect to amended independent claim 35, Geremakis at least fails to teach, “providing a spinal implant device having a first articular component and a second articular component, at least one of the first and second articular components having a keel curved along its length for engagement with a vertebral member.” Geremakis does not teach an implant having a keel as recited. Further, Geremakis at least fails to teach, “preparing a transforaminal opening in an endplate of at least one of a pair of adjacent vertebral members, the transforaminal opening curved along its length to substantially match a curve of the keel.” Again, Geremakis fails to teach preparing an opening in a vertebral member as recited. Along similar lines, Geremakis at least fails to teach, “positioning the assembled spinal implant device in a disc space between adjacent vertebral members from a transforaminal approach to the disc space such that the keel of at least one of the first and second articular components engages the transforaminal opening.” Thus, for at least these reasons Geremakis fails to teach all of the claimed elements of independent claim 35. Claim 39 depends from and further limits claim 35. Therefore, Applicants request that the §102 rejection of claims 35 and 39 be withdrawn.

**Claims 25-29 and 35** stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 3,875,595 to Froning (“Froning”). To sustain the rejections of claims 25-29 and 35 Froning must teach all of the claimed elements of each claim.

With respect to amended independent claim 25, Froning at least fails to teach, “inserting a portion of the first curved flange into a first vertebra at a starting position and advancing the first curved flange through a curved path in the first vertebra from the starting position to a final position.” Rather, Froning discloses lateral insertions and frontal insertions only. Col. 1, Lines 13-20. Froning does not disclose inserting a component of an implant by following a curve of a flange of the component as recited. Thus, for at least these reasons Froning fails to teach all of the claimed elements of independent claim 25. Claims 26-28 depend from and further limit claim 25. Therefore, Applicants request that the §102 rejection of claims 25-28 be withdrawn.

With respect to amended independent claim 29, Froning at least fails to teach, “cutting a transforaminal slot in at least one of the first intervertebral member and the second intervertebral member.” As mentioned above, Froning discloses lateral insertions and frontal insertions only

and does not disclose creating a transforaminal slot as recited. Col. 1, Lines 13-20. Thus, for at least this reason Froning fails to teach all of the claimed elements of independent claim 29. Therefore, Applicants request that the §102 rejection of claim 29 be withdrawn.

With respect to amended independent claim 35, Froning at least fails to teach, “preparing a transforaminal opening in an endplate of at least one of a pair of adjacent vertebral members, the transforaminal opening curved along its length to substantially match a curve of the keel.” Again, Froning does not disclose creating a transforaminal opening as recited. Thus, for at least this reason Froning fails to teach all of the claimed elements of independent claim 35. Therefore, Applicants request that the §102 rejection of claim 35 be withdrawn.

### **§103 Rejections**

**Claims 30-34 and 36-38** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Geremakis in view of U.S. Patent Application Publication 2004/0167538 to Gerber et al. (“Gerber”).

The PTO provides in MPEP §2131 that

“The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.”

The Examiner clearly cannot, using Geremakis and Gerber, establish a prima facie case of obviousness in connection to claims 30-34 and 36-38 for at least the following reasons.

35 U.S.C. §103(a) provides, in part, that:

“A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time of the invention was made to a person having ordinary skill in the art . . .”  
(emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated.

Even when combined Geremakis and Gerber at least fail to disclose, “positioning a cutting guide adjacent at least one of the first intervertebral member and the second intervertebral member and translating a milling bit in the milling guide to cut the transforaminal slot,” as recited in claim 30. As the Examiner recognized, “Geremakis ... fails to disclose the method steps of forming a transforaminal slot with tools as claimed.” Gerber, however, cannot correct this deficiency. In particular, Gerber fails to disclose using a cutting guide and milling bit as recited. Rather, Gerber discloses using a combination of osteotomes 59, curettes 60, and rasps 62 to prepare a space for receiving an implant. Paragraphs [0047]-[0048]. Gerber simply does not disclose the use of a cutting guide, nor a milling bit as recited. Thus, even when combined Geremakis and Gerber fail to disclose the claimed elements of claim 30. Claims 31-34 depend from and further limit claim 30. Therefore, Applicants request that the §103 rejection of claims 30-34 be withdrawn.

With respect to claims 36-38, each of these claims depends from and further limits independent claim 35. Thus, Geremakis and Gerber must be able to teach all of the elements of claim 35 to establish a *prima facie* case of obviousness with respect to claims 36-38. However, Geremakis and Gerber do not teach all of the elements of independent claim 35. In particular, Geremakis and Gerber fail to teach, “providing a spinal implant device having a first articular component and a second articular component, at least one of the first and second articular components having a keel curved along its length for engagement with a vertebral member ... preparing a transforaminal opening in an endplate of at least one of a pair of adjacent vertebral members, the transforaminal opening curved along its length to substantially match a curve of the keel; and positioning the assembled spinal implant device in a disc space between adjacent vertebral members from a transforaminal approach to the disc space such that the keel of at least one of the first and second articular components engages the transforaminal opening.” Neither Geremakis nor Gerber teaches a spinal implant have a keel curved along its length for engagement with a vertebral member. Thus, Geremakis and Gerber also fail to teach preparing a transforaminal opening to substantially match a curve of the keel and positioning the implant such that the keel engages the opening. Thus, even when combined Geremakis and Gerber fail

to disclose the claimed elements of claim 35. Claims 36-38 depend from and further limit claim 35. Therefore, Applicants request that the §103 rejection of claims 36-38 be withdrawn.

**Claims 25-28** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Geremakis in view of U.S. Patent 7,018,412 to Ferreira et al. (“Ferreira”). With respect to independent claim 25, however, even when combined Geremakis and Ferreira fail to teach, “inserting a portion of the first curved flange into a first vertebra at a starting position and advancing the first curved flange through a curved path in the first vertebra from the starting position to a final position.” Neither Geremakis nor discloses inserting a component of an implant by following a curve of a flange of the component as recited. Thus, even when combined Geremakis and Ferreira fail to teach all of the claim elements of independent claim 25. Claims 26-28 depend from and further limit independent claim 25. Therefore, Applicants request that the §103 rejection of claims 25-28 be withdrawn.

**Claims 30-33 and 36-38** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Froning in view of Gerber.

Even when combined Froning and Gerber at least fail to disclose, “positioning a cutting guide adjacent at least one of the first intervertebral member and the second intervertebral member and translating a milling bit in the milling guide to cut the transforaminal slot,” as recited in claim 30. As the Examiner recognized, “Froning ... fails to disclose the method steps of forming a transforaminal slot with tools as claimed.” Gerber, however, cannot correct this deficiency. In particular, Gerber fails to disclose using a cutting guide and milling bit as recited. Rather, Gerber discloses using a combination of osteotomes 59, curettes 60, and rasps 62 to prepare a space for receiving an implant. Paragraphs [0047]-[0048]. Gerber simply does not disclose the use of a cutting guide, nor a milling bit as recited. Thus, even when combined Froning and Gerber fail to disclose the claimed elements of claim 30. Claims 31-34 depend from and further limit claim 30. Therefore, Applicants request that the §103 rejection of claims 30-34 be withdrawn.

With respect to claims 36-38, each of these claims depends from and further limits independent claim 35. Thus, Froning and Gerber must be able to teach all of the elements of claim 35 to establish a prima facie case of obviousness with respect to claims 36-38. However,

Froning and Gerber do not teach all of the elements of independent claim 35. In particular, Froning and Gerber fail to teach, “providing a spinal implant device having a first articular component and a second articular component, at least one of the first and second articular components having a keel curved along its length for engagement with a vertebral member ... preparing a transforaminal opening in an endplate of at least one of a pair of adjacent vertebral members, the transforaminal opening curved along its length to substantially match a curve of the keel; and positioning the assembled spinal implant device in a disc space between adjacent vertebral members from a transforaminal approach to the disc space such that the keel of at least one of the first and second articular components engages the transforaminal opening.” In particular, neither Froning nor Gerber teaches preparing a transforaminal opening to substantially match a curve of the keel nor positioning the implant such that the keel engages the opening. Thus, even when combined Froning and Gerber fail to disclose the claimed elements of claim 35. Claims 36-38 depend from and further limit claim 35. Therefore, Applicants request that the §103 rejection of claims 36-38 be withdrawn.

### III. Conclusion

It is believed that all matters set forth in the Office Action have been addressed, and that all pending claims are in condition for allowance. Favorable consideration and an early indication of the allowance of the claims are respectfully requested. Should the Examiner deem that an interview with Applicant's undersigned attorney would expedite consideration, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



J. Andrew Lowes  
Registration No. 40,706

Dated: 4/16/07  
HAYNES AND BOONE, LLP  
901 Main Street, Suite 3100  
Dallas, Texas 75202-3789  
Telephone: 972/680-7557  
Facsimile: 214/200-0853  
Attorney Docket No.: 31132.42  
Document No R-164254\_1.DOC

I hereby certify that this correspondence is being filed with the United States Patent and Trademark Office via EFS-Web on the following date.

Date: April 16, 2007



Karen L. Underwood